

Site: Shiloh Church Road Site

Task: GWS and Rad Hotspots

Date: 8/8/19

Predicted Predominant Wind Direction: NW

Predicted Maximum Wind Speed: 6 mph



Ludlum 3030 Serial Number:	187982	Cal Due Date:	2/19/2020
Th-230 4π efficiency:	0.3244	Tc-99 4π efficiency:	0.3155
Pu-239 4π efficiency:	0.3996	C-14 4π efficiency:	0.0679
Am-241 4π efficiency:	0.3452	Sr-90 4π efficiency:	0.4264

Notes:

Radionuclide Air Sampling
Daily Summary
Shiloh Church Road Site
Halifax County, Virginia

Date: 8/8/19

Predicted Predominant Wind Direction: NW

Public Results

Effluent Limits	Alpha (Ra-226)	9.00E-13	Beta (Pb-210)	6.00E-13
Air Sampler Location	% Of Effluent Concentration Limit	Alpha Result	% Of Effluent Concentration Limit	Beta Result
Perimeter-1 - South Break Area	<1.41%	-1.67E-15	<66.67%	7.98E-14

Worker Results

Derived Air Concentrations	Alpha (Ra-226)	3.00E-10	Beta (Pb-210)	1.00E-10
Tasks Monitored	% Of DAC	Alpha Result	% of DAC	Beta Result
AC-1 - GWS Team	<0.09%	-9.35E-14	<8.83%	-2.70E-12
AC-5 - Hotspot Team	<0.12%	-6.64E-14	<11.45%	-4.94E-12

Comments:

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Calibrator Serial: 3267

Cal Due Date: 8/9/19

Site: Shiloh Church Road Site

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Air Sampling Unit: AirCheck XR5000 AC-1

Dry Cal Serial: 30709

Cal Due Date: 7/11/20

Dry Cal Serial: 30709					Cal Due Date: 7/11/20					α isotope of concern			Ra-226		β isotope of concern			Pb-210	
Pre Flow Rate (LPM)		4.670					Post Flow Rate (LPM)					4.957							
Start Date/Time		8/8/19 8:48					Stop Date/Time					8/8/19 16:53							
							Total Liters					2185.3							
Analysis Date/Time		Hours After Collection	Bkg count time (min)	Sample count time (min)	α bkg (counts)	gross α (counts)	net α (cpm)	α MDA (μCi/mL)	α (μCi/mL)	β bkg (counts)	gross β (counts)	net β (cpm)	β MDA (μCi/mL)	β (μCi/mL)					
8/14/19 11:40		138.8	120	90	91	55	-0.15	2.75E-13	-9.35E-14	4732	3469	-0.89	8.83E-12	-2.70E-12					
Final Result		Hours After Collection	Bkg count time (min)	Sample count time (min)	α bkg (counts)	gross α (counts)	net α (cpm)	α MDA (μCi/mL)	α (μCi/mL)	β bkg (counts)	gross β (counts)	net β (cpm)	β MDA (μCi/mL)	β (μCi/mL)					
8/14/19 11:40		138.8	120	90	91	55	-0.15	2.75E-13	-9.35E-14	4732	3469	-0.89	8.83E-12	-2.70E-12					
								% DAC:	<0.09%				% DAC:	<8.83%					

Notes: Assigned to GWS Team.

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Air Sampling Unit: AirCheck XR5000 AC-5

Dry Cal Serial: 30709

Cal Due Date: 7/11/20

Dry Cal Serial: 30709					Cal Due Date: 7/11/20					α isotope of concern			Ra-226		β isotope of concern			Pb-210	
Pre Flow Rate (LPM)		4.658					Post Flow Rate (LPM)					3.088							
Start Date/Time		8/8/19 9:11					Stop Date/Time					8/8/19 16:52							
							Total Liters					1684.8							
Analysis Date/Time		Hours After Collection	Bkg count time (min)	Sample count time (min)	α bkg (counts)	gross α (counts)	net α (cpm)	α MDA (μCi/mL)	α (μCi/mL)	β bkg (counts)	gross β (counts)	net β (cpm)	β MDA (μCi/mL)	β (μCi/mL)					
8/14/19 13:35		140.7	120	90	91	61	-0.08	3.56E-13	-6.64E-14	4732	3436	-1.26	1.15E-11	-4.94E-12					
Final Result		Hours After Collection	Bkg count time (min)	Sample count time (min)	α bkg (counts)	gross α (counts)	net α (cpm)	α MDA (μCi/mL)	α (μCi/mL)	β bkg (counts)	gross β (counts)	net β (cpm)	β MDA (μCi/mL)	β (μCi/mL)					
8/14/19 13:35		140.7	120	90	91	61	-0.08	3.56E-13	-6.64E-14	4732	3436	-1.26	1.15E-11	-4.94E-12					
								% DAC:	<0.12%				% DAC:	<11.45%					

Notes: Assigned to Hotspot Team.